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(54) **Microencapsulated aqueous polymerization catalyst.**

(57) The present invention discloses an aqueous polymerization medium comprising (1) a catalyst composition which contains (a) an organometallic compound and (b) a transition metal compound wherein said catalyst composition is microencapsulated in a polyene product; and (2) water. This invention also discloses an aqueous polymerization medium comprising (1) a catalyst composition which is prepared by dissolving in an inert organic solvent containing at least one polyene (a) a transition metal compound, and (b) an organometallic compound; and (2) water. This aqueous polymerization medium is very useful in the polymerization of unsaturated hydrocarbon monomers. It is of greatest value in the polymerization of conjugated diolefin monomers into stereo-regulted polymers. This invention reveals a very useful process for producing polybutadiene composed essentially of syndiotactic 1,2-polybutadiene in an aqueous medium comprising polymerizing 1,3-butadiene in said aqueous medium in the presence of (1) a catalyst composition microencapsulated in a polyene product which contains (a) at least one cobalt compound selected from the group consisting of (i) ß-diketone complexes of cobalt, (ii) ß-keto acid ester complexes of cobalt, (iii) cobalt salts of organic carboxylic acids having 6 to 15 carbon atoms, and (iv) complexes of halogenated cobalt compounds of the formula CoX_n, wherein X represents a halogen atom and n represents 2 or 3, with an organic compound selected from the group consisting of tertiary amine alcohols, tertiary phosphines, ketones and N,N-dialkylamides, and (b) at least one organoaluminium compound of the formula AlR_3, wherein R represents a hydrocarbon radical of 1 to 6 carbon atoms; and (2) carbon disulfide.

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EUROPEAN SEARCH REPORT

Application number

EP 83 63 0140

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
A	US-A-4 153 767 (H. UENO et al.) * Claim 1 *		C 08 F 136/06 C 08 F 4/70 B 01 J 33/00
A	DE-A-2 445 776 (UBE IND.) * Claim 1 *		
A	FR-A-2 121 003 (NIPPON ZEON) * Page 1 *		
A	FR-A-1 251 154 (MONTECATINI) * Abstract *		
A	FR-A-2 055 491 (VEBA-CHEMIE AG) * Claim 5 *		TECHNICAL FIELDS SEARCHED (Int. Cl. ³) C 08 F B 01 J

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	13-02-1984	VAN HUMBEECK F.W.C.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
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